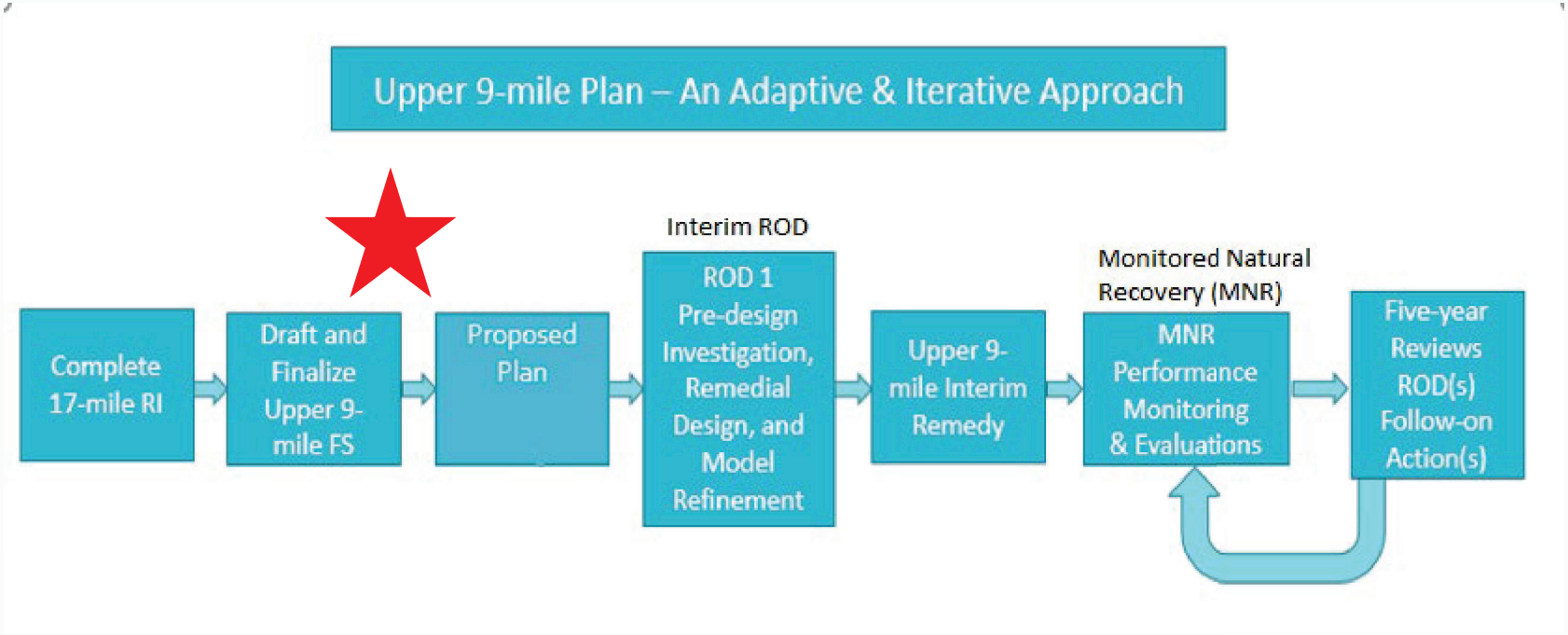
Community Advisory Group Meeting
July 09, 2020

623504

Interim Remedy Schedule



Interim Remedy Remedial Action Objectives (RAOs)

- RAO 1: Address surface sediment sources from river mile (RM) 8.3 to 15 to attain 2,3,7,8-TCDD surface area-weighted average concentration (SWAC) of not more than 85 parts per trillion (ppt) (91% reduction in SWAC) and to attain PCB SWAC at or below background
- RAO 2: Address subsurface sediments from RM 8.3 to 15 that could become contamination sources based on erosion potential and remedial action levels (RALs) derived for subsurface sediments

Revised Draft Interim Remedy Feasibility Study (FS) Alternatives

- Interim remedy **target** 2,3,7,8-TCDD SWACs:
  - 65 ppt
  - 75 ppt
  - 85 ppt
  - 125 ppt (this target SWAC is for comparison in the interim remedy FS, and is not be eligible for selection)

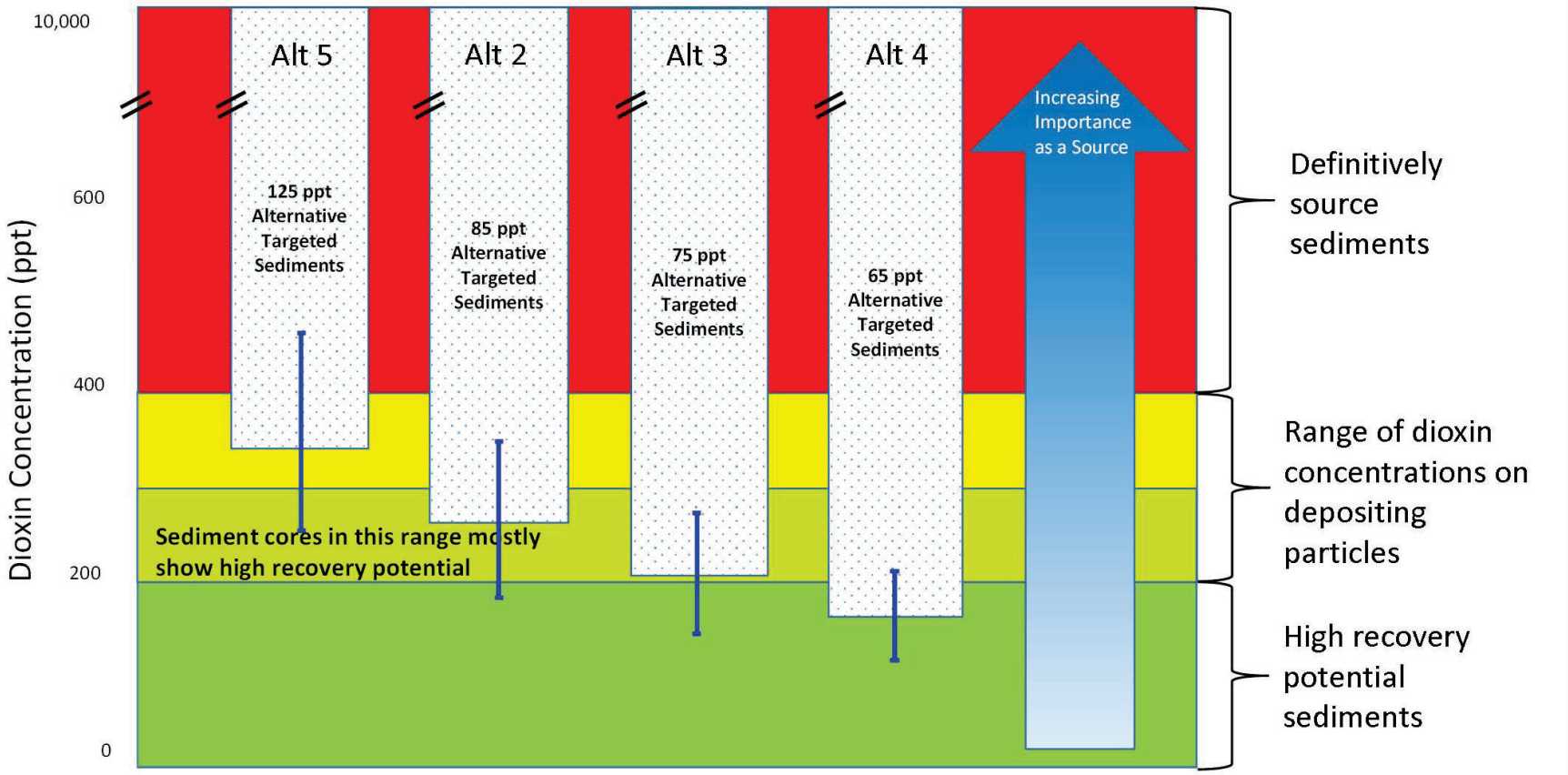
Note: 65, 75, and 85 ppt SWAC alternatives include target PCB SWACs at or below background

Revised Draft Interim Remedy FS Alternatives

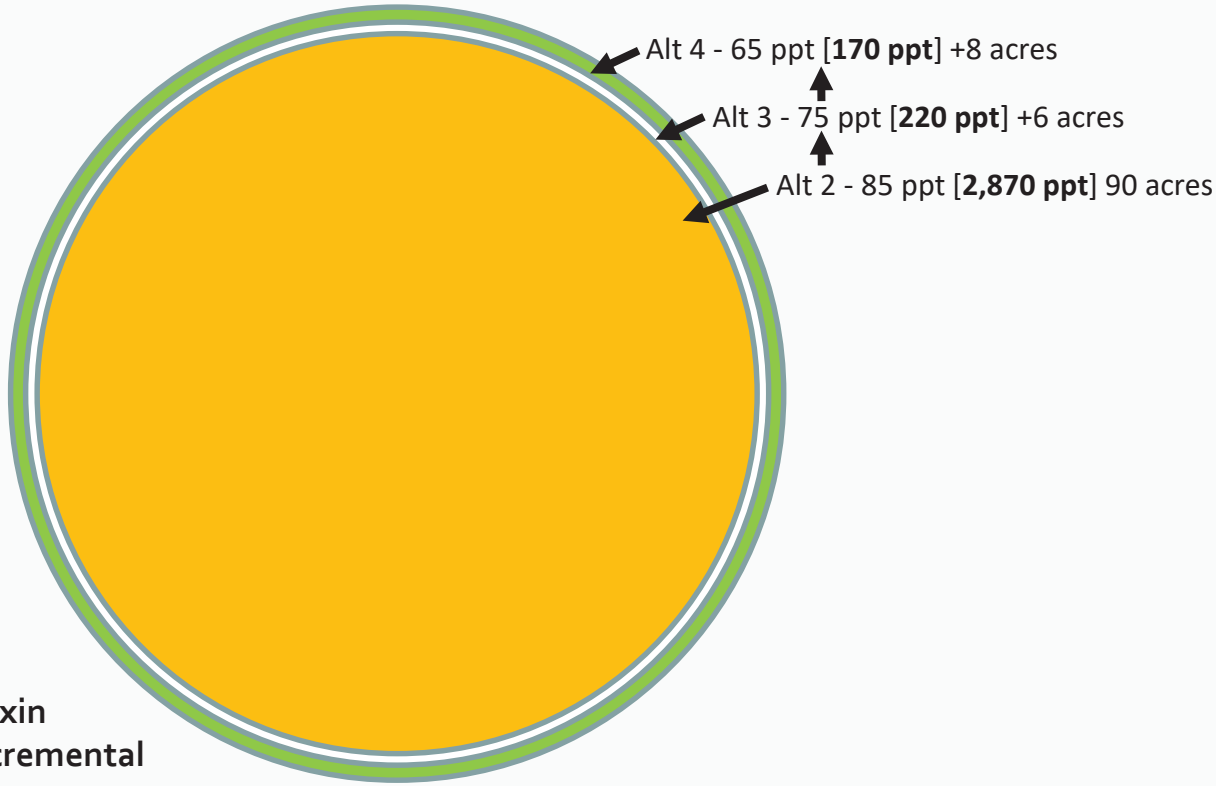
Alternative (Target Dioxin SWAC)		RAL (ppt)	% Dioxin SWAC Reduction	Area (acres)	Volume (cubic yards)	Duration (Years)	Cost ($M)
1	No action (932 ppt)	---	0%	0	0	---	0
2	85 ppt	260	91%	90	363,000	4.3	420
3	75 ppt	205	92%	96	387,000	4.6	441
4	65 ppt	165	94%	104	419,000	4.9	468
5	125 ppt	346	87%	62	250,000	3.2	321

Interim Remedy FS Alternative Comparisons

- Sediment source
  - Between 200 and 400 ppt 2,3,7,8-TCDD
- Grain size
  - Smaller grain size (silty) generally more contamination
- Half life
  - Time it takes for contamination to decrease by half; a measure of recovery rate
- Volume and contaminant mass removed
- Cost



346	260	205	164	RALs from central tendency conditional simulation
256 - 470	183 - 352	144 - 275	115 - 212	Range of RALs across 100 conditional simulations



LEGEND:
Dioxin SWAC Target [**Average Dioxin Concentration Remediated in Incremental Area**] Acreage

Alt	Model Projected SWAC Half-Life (Years)	
	Dioxin (years)	Total PCBs (years)
1 No Action	125-244	79-110
2 85 ppt	8.1-18	18-46
3 75 ppt	7.6-15	17-43
4 65 ppt	7.1-13	18-43
5 125 ppt	15-65	36-71

Note: ranges from model simulations with two alternate sediment transport schemes and two contaminant release rates during dredging

Alternatives 2, 3, and 4 all greatly accelerate recovery relative to No Action and achieve similar levels of source control based on similarity in the post-IR rates of recovery

Cost of Alternatives and Summary of Key Metrics				
Alternative	**Alternative**	**2**	**3**	**4**
	Target Dioxin SWAC (ppt)	**85**	**75**	**65**
	Target Total PCB SWAC (ppm)	**0.46**	**0.46**	**0.46**
Metric Value	Cost (PV in $M)	420	441	468
	Dioxin Surface RAL (ppt)	260	205	164
	Total PCB Surface RAL (ppm)	1	1	1
	Volume Sediment Removed (CY)	363,000	387,000	419,000
	Construction Duration (years)	4.3	4.6	4.9
	Mass Dioxin Removed from Dredge Prism (g)	590	610	630
	Mass Total PCB Removed from Dredge Prism (kg)	810	840	860
Metric Value Incremental Change Compared to Alternative 2	Cost	--	5.0%	11.4%
	Dioxin Surface RAL	--	-21.2%	-36.9%
	Total PCB Surface RAL	--	0.0%	0.0%
	Volume Sediment Removed	--	6.6%	15.4%
	Construction Duration	--	7.0%	14.0%
	Mass Dioxin Removed from Dredge Prism	--	3.4%	6.8%
	Mass Total PCB Removed from Dredge Prism	--	3.7%	6.2%

Upper 9 Mile Long-term Schedule

- Status of final CSTAG/NRRB Meeting
- August 2020 – Finalize Interim Remedy FS
- August 2020 – Brief EPA Administrator
- September 2020 – Proposed Plan and Proposed Plan Public Meetings
- Winter 2020/2021 – Record of Decision for Interim Remedy for Source Control